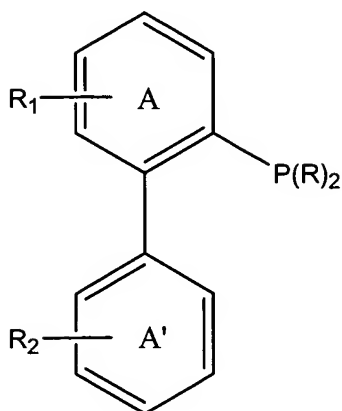


In the Claims:

1. **(currently amended)** A ligand represented by structure I:



I

wherein

R is selected independently for each occurrence from the group consisting of alkyl, cycloalkyl, aryl, heteroaryl, aralkyl, heteroaralkyl, and  $-(CH_2)_m-R_{80}$ ;

the A and A' rings of the biphenyl core independently may be unsubstituted or substituted with R<sub>1</sub> and R<sub>2</sub>, respectively, any number of times up to the limitations imposed by stability and the rules of valence;

R<sub>1</sub> and R<sub>2</sub>, when present, are selected independently for each occurrence from the group consisting of ~~alkyl~~ ethyl, propyl, butyl, pentyl, hexyl, cycloalkyl, heterocycloalkyl, ~~aryl~~, heteroaryl, aralkyl, heteroaralkyl,  ~~$-SiR_3$~~   $-Si(R)_3$ , and  $-(CH_2)_m-R_{80}$ ;

R<sub>80</sub> represents an unsubstituted or substituted aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle;

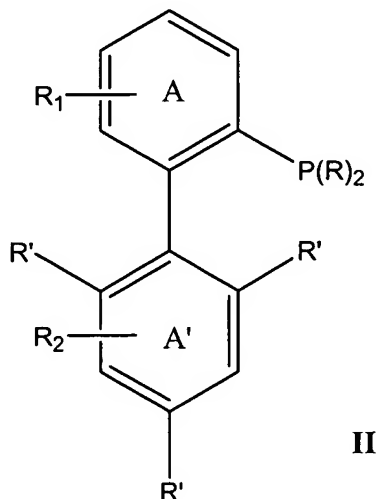
m is independently for each occurrence an integer in the range 0 to 8 inclusive; and

the ligand, when chiral, is a mixture of enantiomers or a single enantiomer.

2. **(currently amended)** The ligand of claim 1, wherein R represents independently for each occurrence ~~alkyl~~ ethyl, propyl, butyl, pentyl, hexyl, cycloalkyl or aryl; at least two instances

of  $R_2$  are present; and  $R_2$  is selected independently for each occurrence from the group consisting of alkyl ethyl, propyl, butyl, pentyl, hexyl and cycloalkyl.

3. **(currently amended)** A ligand represented by structure II:



wherein

~~R and R'~~ are is selected independently for each occurrence from the group consisting of alkyl, cycloalkyl, and  $-(CH_2)_m-R_{80}$ ;

R' is selected independently for each occurrence from the group consisting of alkyl, cycloalkyl, and  $-(CH_2)_m-R_{80}$ ;

the A and A' rings of the biphenyl core independently may be unsubstituted or substituted with  $R_1$  and  $R_2$ , respectively, any number of times up to the limitations imposed by stability and the rules of valence;

$R_1$  and  $R_2$ , when present, are selected independently for each occurrence from the group consisting of alkyl, cycloalkyl, halogen,  $-SiR_3$ ,  $-Si(R)_3$ , and  $-(CH_2)_m-R_{80}$ ;

$R_{80}$  represents independently for each occurrence cycloalkyl or aryl;

$m$  is independently for each occurrence an integer in the range 0 to 8 inclusive; and

the ligand, when chiral, is a mixture of enantiomers or a single enantiomer.

4. **(original)** The ligand of claim 3, wherein  $R_1$  is absent; and  $R_2$  is absent.

5. **(currently amended)** The ligand of claim 3, wherein R represents independently for

each occurrence ~~alkyl or cycloalkyl~~.

6. **(currently amended)** The ligand of claim 3, wherein R represents independently for each occurrence ~~ethyl, cyclohexyl, or cyclopropyl, isopropyl or tert-butyl~~.

7. **(currently amended)** The ligand of claim 3, wherein R represents independently for each occurrence cyclohexyl.

8. **(original)** The ligand of claim 3, wherein R' represents independently for each occurrence alkyl.

9. **(original)** The ligand of claim 3, wherein R' represents independently for each occurrence isopropyl.

10. **(currently amended)** The ligand of claim 3, wherein R<sub>1</sub> is absent; R<sub>2</sub> is absent; and R represents independently for each occurrence ~~alkyl or cycloalkyl~~.

11. **(currently amended)** The ligand of claim 3, wherein R<sub>1</sub> is absent; R<sub>2</sub> is absent; and R represents independently for each occurrence ~~ethyl, cyclohexyl, or cyclopropyl, isopropyl or tert-butyl~~.

12. **(original)** The ligand of claim 3, wherein R<sub>1</sub> is absent; R<sub>2</sub> is absent; and R represents independently for each occurrence cyclohexyl.

13. **(currently amended)** The ligand of claim 3, wherein R<sub>1</sub> is absent; R<sub>2</sub> is absent; R represents independently for each occurrence ~~alkyl or cycloalkyl~~; and R' represents independently for each occurrence alkyl.

14. **(currently amended)** The ligand of claim 3, wherein R<sub>1</sub> is absent; R<sub>2</sub> is absent; R represents independently for each occurrence ~~ethyl, cyclohexyl, or cyclopropyl, isopropyl or tert-butyl~~; and R' represents independently for each occurrence alkyl.

15. **(original)** The ligand of claim 3, wherein R<sub>1</sub> is absent; R<sub>2</sub> is absent; R represents independently for each occurrence cyclohexyl; and R' represents independently for each occurrence alkyl.

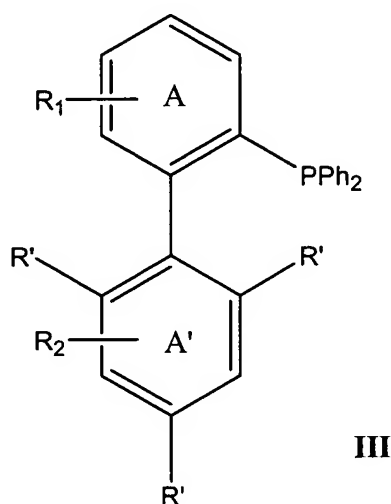
16. **(currently amended)** The ligand of claim 3, wherein R<sub>1</sub> is absent; R<sub>2</sub> is absent; R represents independently for each occurrence ~~alkyl or cycloalkyl~~; and R' represents independently for each occurrence isopropyl.

17. **(currently amended)** The ligand of claim 3, wherein  $R_1$  is absent;  $R_2$  is absent; R represents independently for each occurrence ~~ethyl, cyclohexyl, or cyclopropyl, isopropyl or tert-butyl~~; and  $R'$  represents independently for each occurrence isopropyl.

18. **(original)** The ligand of claim 3, wherein  $R_1$  is absent;  $R_2$  is absent; R represents independently for each occurrence cyclohexyl; and  $R'$  represents independently for each occurrence isopropyl.

Claims 19 - 106 **(canceled)**

107. **(new)** A ligand represented by structure **III**:



wherein

$R'$  is selected independently for each occurrence from the group consisting of alkyl, cycloalkyl, and  $-(CH_2)_m-R_{80}$ ;

the A and A' rings of the biphenyl core independently may be unsubstituted or substituted with  $R_1$  and  $R_2$ , respectively, any number of times up to the limitations imposed by stability and the rules of valence;

$R_1$  and  $R_2$ , when present, are selected independently for each occurrence from the group consisting of alkyl, cycloalkyl, halogen,  $-\text{Si}(\text{R})_3$ , and  $-(CH_2)_m-R_{80}$ ;

$R_{80}$  represents independently for each occurrence cycloalkyl or aryl;

m is independently for each occurrence an integer in the range 0 to 8 inclusive; and

the ligand, when chiral, is a mixture of enantiomers or a single enantiomer.

108. **(new)** The ligand of claim 107, wherein  $R_1$  is absent; and  $R_2$  is absent.
109. **(new)** The ligand of claim 107, wherein  $R'$  represents independently for each occurrence alkyl.
110. **(new)** The ligand of claim 107, wherein  $R'$  represents independently for each occurrence isopropyl.
111. **(new)** The ligand of claim 107, wherein  $R_1$  is absent;  $R_2$  is absent; and  $R'$  represents independently for each occurrence alkyl.
112. **(new)** The ligand of claim 107, wherein  $R_1$  is absent;  $R_2$  is absent; and  $R'$  represents independently for each occurrence isopropyl.